

The PSYCHOLOGICAL RECORD

Vol. I

MARCH, 1937

No. 2

AN EMPIRICAL SCALE FOR MEASURING MILITARISM-PACIFISM*

JOSEPH ZUBIN AND MORRIS GRISTLE



The Principia Press, Inc.
Bloomington, Ind.

This number, 10 cents

EDITOR

J. R. Kantor
Indiana University

MANAGING EDITOR

C. M. Louttit
Indiana University

DEPARTMENTAL EDITORS**Abnormal**

Edmund S. Conklin,
Indiana

Experimental

B. F. Skinner,
Minnesota

Child

Helen Koch,
Chicago

Medical

Norman Cameron, M. D.,
Johns Hopkins

Clinical

B. M. Castner,
Yale

Physiological

C. F. Scofield,
Buffalo

Comparative

E. A. Culler,
Illinois

Psychometrics

J. P. Guilford,
Nebraska

Educational

J. G. Peatman,
C.C.N.Y.

Social

Norman C. Meier,
Iowa

Editorial Assistant, J. W. Carter Jr., Indiana

The Principia Press, Inc., has undertaken the publication of this co-operative journal to afford authors the opportunity of immediate publication at the least possible expense. The present low cost of publication, and possible future reductions, depend entirely upon the number of subscriptions. The subscription price has been made low to induce individuals to subscribe. Under the Articles of Incorporation of the Principia Press no profit can be made on any of its publications. Therefore an increase in the number of subscribers will be reflected in reduced costs to authors and an increase in the number of pages published annually.

EDITORIAL BOARD. The above named board of associate editors have agreed to serve in an active capacity for a period of three years, and all manuscripts will be submitted to them.

MANUSCRIPTS may be sent to the appropriate associate editor or to Dr. J. R. Kantor. Longer papers (30 or more typewritten pages) in the above mentioned fields are especially desired.

COSTS. The cost of publication will be \$2.00 per page of approximately 500 words. For tabular matter or illustrations in excess of 10 per cent of the total length of the paper there will be an excess charge of 75 cents per page. An additional 50 cents will be charged for each paper for the cost of covers.

REPRINTS. One hundred copies of each paper will be supplied gratis. Additional copies may be purchased in any quantity at a rate which will be set when the author is informed of the cost of publication.

ROYALTIES. Fifty per cent of the net income from the sale of individual copies, or from copies sold as part of back volumes, will be credited as royalties to the author's account. Royalties cannot be paid on income from subscriptions current in the year of publication.

SUBSCRIPTIONS. The subscription price is \$4.00 per year for an annual volume of approximately 500 pages. Individual papers will be sold at an advertised price, which will depend upon the size of the article. Foreign subscriptions will be \$4.50.

CORRESPONDENCE concerning editorial matters should be addressed to Dr. J. R. Kantor, Indiana University. Business correspondence should be addressed to Dr. C. M. Louttit, Principia Press, Inc., Bloomington, Ind.

Copyright, 1937
Principia Press, Inc.

AN EMPIRICAL SCALE FOR MEASURING MILITARISM-PACIFISM*

JOSEPH ZUBIN¹ AND MORRIS GRISTLE²

College of the City of New York

This paper presents a preliminary attempt to devise an objective test of students' attitudes towards war and peace. It differs from the other attempts in this field in technique only. The most popular technique is to start out with several hundred items, prepare an a priori scoring key, follow with an item analysis by means of the criterion of internal consistency, and end up with a weight for each response based upon this analysis. This approach makes at least two assumptions, neither of which have ever been demonstrated as valid for questionnaire tests. These assumptions are that the subject responds truthfully and that the test-maker's a priori judgment of the response's value is valid. Both of these assumptions have been found wanting in the case of adjustment questionnaires, and there is considerable doubt whether they are tenable in attitude measurement. For this reason, the technique of the a priori scoring key was discarded in favor of the discrete group method. This method consists of finding two distinct groups that belong acknowledgedly to the two opposite ends of the attitude scale. This cannot always be done. For instance, it would be difficult to validate a test of the attitude towards honesty in this manner, because the dishonest individuals would probably be unwilling to cooperate. But there are a sufficient number of militarists and pacifists who are willing to submit to testing.

If our two groups have been well chosen and truly represent the two ends of the scale, we need not concern ourselves with the question of veracity and consistency. A comparison of responses of the two groups will indicate which responses are characteristic of each. In this manner, an empirical scoring key will be obtained.

The diagnostic value of the test depends solely upon its ability to differentiate between individuals professing two opposite points of view, and not on the veracity of the responses, or on their logical consistency. After such a test has been developed, it can be applied to an unselected group. The scores of these individuals will indicate to what extent their opinions agree with the pacifists or militarists. Such differentiation is not always possible in tests validated on the a priori logical key, for scores on such tests indicate merely how an individual

* Manuscript recommended for publication by Dr. C. M. Louttit, March 4, 1937.

¹ Read before Section I (Psychology) of the American Association for the Advancement of Science, Atlantic City, N. J., 1936.

² Based on Master's Essay carried out under the supervision of the senior author.

measures up to what the test maker expects of him. It is really a measure of his logical consistency, as compared to that of the test maker.

But we have no real basis for believing that individuals are logically consistent in their attitudes. Only in an empirically validated test giving opportunity for variations of attitude can we obtain scores that will correspond to lines of cleavage in attitude. It must be borne in mind that the purpose of this test is not to obtain a measure of how logical our thinking is, but which group our thinking has most in common with.

The first step in this study was the selection of the two discrete groups. The militarist group chosen for this study consisted of the Reserve Officers' Training Corps at the College of the City of New York. Military Science is not a required course at the College, and these students selected the course of their own free will. If they are not militarists philosophically, they have at least more tolerance towards it than unselected individuals. The pacifist group consisted of individuals belonging to pacifistic organizations. A test of 95 items was administered to both groups and the differentiating power of the items was determined by the chi square method. The work of determining the diagnostic value of each item was considerably shortened

TABLE I

FREQUENCY OF PACIFIST, MILITARIST AND NEUTRAL
RESPONSES BY THE RESPONSE CHOICES

	Yes	No	?	Total
Pacifist Responses (+)	21	44	1	66
Militarist Responses (—)	31	17	37	85
	—	—	—	—
Significant Responses	52	61	38	151
Neutral Responses (0)	13	4	27	44
	—	—	—	—
Total	65	65	65	195

by an application of a specially prepared chart³. This chart makes it unnecessary to compute critical ratios, since the critical values are given directly. The ellipse on which the critical values lie can be readily drawn for any population. As a result of this analysis, 65 items out of the 95 were retained.

³ This chart appeared in the *Journal of Educational Psychology* Sept., 1936 in an article entitled: Note on A Graphic Method for Determining the Significance of the Difference between Group Frequencies.

The most striking result of this analysis was the importance of the question mark or doubtful category. Many investigators have advised against using this category on the grounds that it is rarely if ever used by the subjects. Furthermore, it is claimed that by forcing an individual to choose between two alternatives YES and NO, a more significant judgment can be secured than when the question mark is offered as a way out of a dilemma. The present research indicates that the question mark is by no means used rarely and accounts for a considerable proportion of the significant responses.

The question mark accounted for 38 of the 151 significant responses or for nearly 23 percent of them. It played a more important role among the responses of the R. O. T. C. students than among the responses of the pacifist students, about 44 percent of all the diagnostic R. O. T. C. responses being question marks. It is interesting to speculate why the question mark is so much more characteristic of the R. O. T. C. point of view than of the pacifistic point of view. Are the members of the R. O. T. C. uncertain of the tenability of their views, or do they tend to be more conservative and guarded in their responses than their pacifistic colleagues? It would be interesting to find out whether students at West Point and army officers in general tend to respond with question marks in equal proportions.

After this validation process was completed, the test was administered to a group of 260 unselected college students about whose views nothing was known. Their total scores were obtained by subtracting the number of militaristic responses (responses characteristic of the R. O. T. C. group) from the number of pacifistic responses. Thus, the theoretical range is from +65 for the extreme pacifists, to -65 for the extreme militarists. Figure I shows the distribution of scores.

The group as a whole is not neutral on the issue of militarism-pacifism. The mean is not at 0, the neutral point on the scale, but at 36 in the direction of pacifism. The graph indicates that the average student resembles the pacifists more than the militarists. It is likely that if there had been more items in the test, the scores would not have bunched themselves so closely at the right of the mean, and a more symmetrical distribution about the mean would have been obtained.

The scale is highly reliable, having an odd-even reliability of $.890 \pm .008$ which becomes .95 when stepped up by the Spearman-Brown Equation.

The score on the test shows a positive relationship with scholastic status, age-grade status, and type of college course pursued. These relationships are shown in Tables II, III and IV.

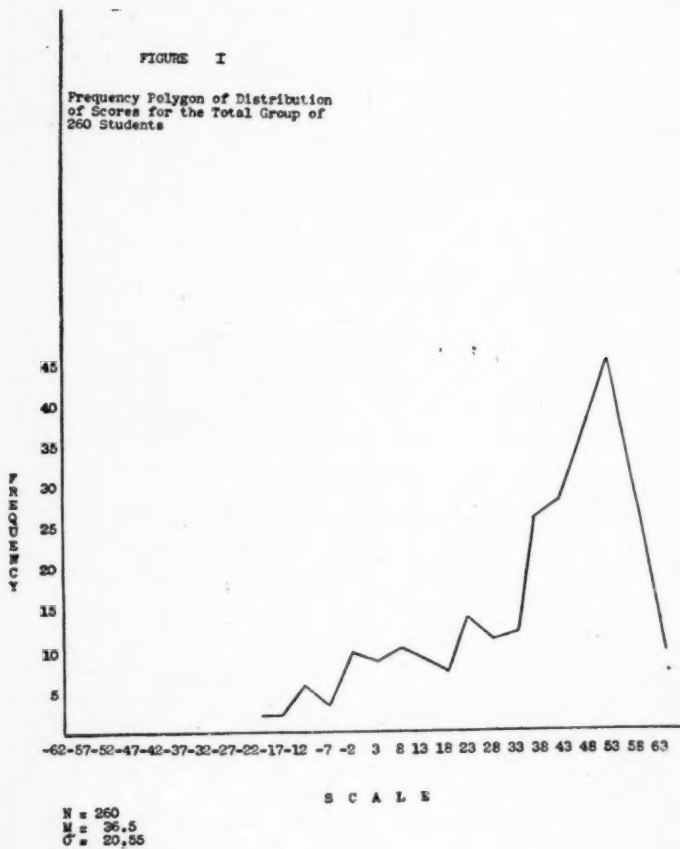


TABLE II
PACIFISM AND SCHOLASTIC STATUS

	N	Mean	Standard Deviation	V
Freshmen	28	32.1	23.35	72.7
Sophomores	51	33.4	19.30	57.7
Juniors	102	37.5	21.95	58.5
Seniors	58	40.5	15.40	38.0
Total	239	36.7	20.41	55.6

The students become more pacifistic as they progress through college. The average score rises from 32.1 for Freshmen, to 40.5 for Seniors. The students also become more homogeneous in their pacifism. The coefficient of variation for the Freshmen is 72.7, while for the Seniors it is only 38.0.

The relationship between pacifism and age-grade status is shown in Table III.

TABLE III
PACIFISM AND AGE GRADE STATUS

Years Accelerated	N	Mean
+2	26	40.2
1	79	41.1
0	67	36.8
-1	39	31.2
-2	20	26.1
Total	231	36.8

Since age-grade status is usually taken as a good indicator of general intelligence for groups, it is likely that the relationship between age-grade status and pacifism will reflect the influence of intelligence. The most accelerated students attained an average of 40.2 while the most retarded had an average of 26.1. There is thus a definite positive relationship between pacifism and the degree of acceleration.

Do the interests of the students have any relation to their pacifist tendencies? The students in the various major subjects show interesting differences in pacifism. Table IV gives these data.

TABLE IV
PACIFISM AND COLLEGE MAJOR

Major Subjects	N	Mean	Standard Deviation	V
Social Sciences	73	41.0	17.00	41.4
Exact Sciences	93	34.1	20.70	60.7
Languages & Literature	58	34.0	23.60	70.0
Total	224	36.3	20.74	57.1

The students in the social sciences are more pacifistic than the students in the exact sciences or in language and literature. Whether this shows the influence of the study of social sciences, or whether it is simply due to selection, the pacifist-minded students tending to select the social sciences in larger numbers—could not be determined from the data.

SUMMARY

A test for measuring the attitudes of college students towards Militarism and towards Pacifism was devised by utilizing the opinions of two contrasting groups—members of the Reserve Officers' Training Corps and members of pacifist societies. Each member of the two criterion groups was asked whether he approved, disapproved, or was in doubt about each of 95 controversial issues involving war and peace. The test was found to be highly reliable, having a reliability of .95. The members of the R. O. T. C. admitted more freely that they were in doubt about some of these issues than the pacifists.

The average college student was found to be more pacifist than militarist, attaining an average of 36 points above the neutral point of zero. Higher classmen tend to be more pacifist than lower classmen. The younger students in each of the college classes and those who advance through college at a rapid or average rate tend to be more pacifistic than the older students and those who advance at a less rapid rate. Social science majors are more pacifistic than exact science majors or language and literature majors.

